UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,798	02/20/2004	Mika Grundstrom	4208-4177	7193

27123 7590 07/25/2007

MORGAN & FINNEGAN, L.L.P.
3 WORLD FINANCIAL CENTER
NEW YORK, NY 10281-2101

EXAMINER	
DUONG, CHRISTINE T	
ART UNIT	**PAPER NUMBER**
2616	
MAIL DATE	**DELIVERY MODE**
07/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/783,798	GRUNDSTROM ET AL.	
	Examiner	Art Unit	
	Christine Duong	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-58* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-58* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *04/12/2004 and 08/23/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The references listed in the Information Disclosure Statement, filed on 12 April 2004 and 23 August 2004, have been considered by the examiner (see attached PTO-1449 form or PTO/SB/08A and 08B forms).

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-11, 15-24, 28-40, 44-53, 57-58** are rejected under 35 U.S.C. 102(e) as being anticipated by Kammer et al. (US Patent No. 6,950,645 B1).

Regarding **Claims 1** and **30**, Kammer et al. discloses a system for device discovery, comprising:

a memory having program code stored therein **("a volatile memory 410 (e.g., random access memory, RAM) coupled with the bus 300 for storing information and instructions for the central processor 450", Column 9, Lines 33-36, Fig. 4)**; and

a processor disposed in communication with the memory for carrying out instructions in accordance with the stored program code **("a central processor 450**

coupled with the bus 300 for processing information and instructions", Column 9, Lines 32-33, Fig. 4);

wherein the program code, when executed by the processor, causes the processor to perform :

responding to a first device discovery inquiry **("When responder device 730 is in discoverable mode, it sends inquiry response 742 to initiator device 720 in response to inquiry 740", Column 11, Lines 58-60)**;

ignoring one or more further device discovery inquiries in accordance with one or more criteria **("responder device 730 is non-discoverable (not in the discoverable mode) when the device is powered off (in sleep mode or standby). When non-discoverable, responder device 730 may scan for inquiry messages 740, but will not send an inquiry response 742 in response to an inquiry message 740", Column 11, Line 64 to Column 12, Line 4)**; and

responding to a subsequent device discovery inquiry **("when connectable, responder device 730 can respond to page 744 (e.g., page response 746)", Column 12, Lines 10-12)**.

Regarding **Claims 2** and **31**, Kammer et al. discloses everything claimed as applied above (see *Claims 1* and *30*, respectively). In addition, Kammer et al. discloses one or more of the criteria specify a device discovery inquiry dispatch schedule **("The inquiry message enables the Bluetooth device to discover which other Bluetooth units are in range and what their addresses are, as well as other information such as their clocks and class-of-device", Column 8, Lines 44-48).**

Regarding **Claims 3** and **32**, Kammer et al. discloses everything claimed as applied above (see *Claims 2* and *31*, respectively). In addition, Kammer et al. discloses the device discovery inquiry dispatch schedule is negotiated with a device dispatching the first device discovery inquiry **("The inquiry message enables the Bluetooth device to discover which other Bluetooth units are in range and what their addresses are, as well as other information such as their clocks and class-of-device", Column 8, Lines 44-48 and further "All devices participating on the same piconet are synchronized to their respective hopping sequence", Column 7, Lines 7-8).**

Regarding **Claims 4** and **33**, Kammer et al. discloses everything claimed as applied above (see *Claims 2* and *31*, respectively). In addition, Kammer et al. discloses the processor further performs employing the schedule to determine an identity of a device dispatching a received device discovery inquiry **("The inquiry message enables the Bluetooth device to discover which other Bluetooth units are in range and what their addresses are, as well as other information such as their clocks and class-of-device", Column 8, Lines 44-48).**

Regarding **Claims 5** and **34**, Kammer et al. discloses everything claimed as applied above (see *Claims 1* and *30*, respectively). In addition, Kammer et al. discloses one or more of the criteria specify a time interval **("the responder device will be in discoverable mode for a reduced period of time", Column 13, Lines 7-9).**

Regarding **Claims 6** and **35**, Kammer et al. discloses everything claimed as applied above (see *Claims 1* and *30*, respectively). In addition, Kammer et al. discloses

one or more of the criteria specify a number of device discovery inquiries to ignore **("A piconet starts with two connected devices, such as a computer system and a cellular phone, and may grow to eight connected devices", Column 6, Lines 64-66).**

Regarding **Claims 7** and **36**, Kammer et al. discloses everything claimed as applied above (see *Claims 1* and *30*, respectively). In addition, Kammer et al. discloses one or more of the criteria are received from a device dispatching the first device discovery inquiry **("responder device 730 can receive a directed message (a message that specifies responder device 730 by its name and/or address, such as page 744) from initiator device 720", Column 12, Lines 7-10).**

Regarding **Claims 8** and **37**, Kammer et al. discloses everything claimed as applied above (see *Claims 1* and *30*, respectively). In addition, Kammer et al. discloses one or more of the criteria are selected to realize power savings **("responder device 730 is in discoverable mode for a reduced period of time, thereby conserving power (battery) resources", Column 13, Lines 7-9).**

Regarding **Claims 9** and **38**, Kammer et al. discloses everything claimed as applied above (see *Claims 1* and *30*, respectively). In addition, Kammer et al. discloses one or more of the criteria are selected to realize discovery time responsiveness **("responder device 730 will also respond to fewer inquiries 740, which in turn will reduce the number of pages 744 and page responses 746", Column 13, Lines 10-12)**

Regarding **Claims 10** and **39**, Kammer et al. discloses everything claimed as applied above (see *Claims 1* and *30*, respectively). In addition, Kammer et al. discloses the processor further performs exchanging information regarding discovered devices **("The inquiry message enables the Bluetooth device to discover which other Bluetooth units are in range and what their addresses are, as well as other information such as their clocks and class-of-device", Column 8, Lines 44-48).**

Regarding **Claims 11** and **40**, Kammer et al. discloses everything claimed as applied above (see *Claims 1* and *30*, respectively). In addition, Kammer et al. discloses Bluetooth is employed **("portable computer system 400 is a Bluetooth-enabled device", Column 9, Lines 24-25).**

Regarding **Claims 15** and **44**, Kammer et al. discloses a system for device discovery, comprising:

a memory having program code stored therein **("a volatile memory 410 (e.g., random access memory, RAM) coupled with the bus 300 for storing information and instructions for the central processor 450", Column 9, Lines 33-36)**; and

a processor disposed in communication with the memory for carrying out instructions in accordance with the stored program code **("a central processor 450 coupled with the bus 300 for processing information and instructions", Column 9, Lines 32-33)**;

wherein the program code, when executed by the processor, causes the processor to perform:

receiving from a remote device a reply to a first device discovery inquiry **("When responder device 730 is in discoverable mode, it sends inquiry response 742 to initiator device 720 in response to inquiry 740", Column 11, Lines 58-60)**;

determining no reply to have been received from the remote device to one or more further device discovery inquiries in accordance with one or more criteria **("responder device 730 is non-discoverable (not in the discoverable mode) when the device is powered off (in sleep mode or standby). When non-discoverable, responder device 730 may scan for inquiry messages 740, but will not send an inquiry response 742 in response to an inquiry message 740", Column 11, Line 64 to Column 12, Line 4)**; and

receiving a reply from the remote device to a subsequent device discovery inquiry **("when connectable, responder device 730 can respond to page 744 (e.g., page response 746)", Column 12, Lines 10-12)**.

Regarding **Claims 16** and **45**, Kammer et al. discloses everything claimed as applied above (see *Claims 15* and *44*, respectively). In addition, Kammer et al. discloses one or more of the criteria specify a device discovery inquiry dispatch schedule **("The inquiry message enables the Bluetooth device to discover which other Bluetooth units are in range and what their addresses are, as well as other information such as their clocks and class-of-device", Column 8, Lines 44-48).**

Regarding **Claims 17** and **46**, Kammer et al. discloses everything claimed as applied above (see *Claims 16* and *45*, respectively). In addition, Kammer et al. discloses the processor further performs employing the schedule to determine an

identity of a device dispatching a received device discovery inquiry **("The inquiry message enables the Bluetooth device to discover which other Bluetooth units are in range and what their addresses are, as well as other information such as their clocks and class-of-device", Column 8, Lines 44-48).**

Regarding **Claims 18** and **47**, Kammer et al. discloses everything claimed as applied above (see *Claims 15* and *44*, respectively). In addition, Kammer et al. discloses one or more of the criteria specify a time interval **("the responder device will be in discoverable mode for a reduced period of time", Column 13, Lines 7-9).**

Regarding **Claims 19** and **48**, Kammer et al. discloses everything claimed as applied above (see *Claims 15* and *44*, respectively). In addition, Kammer et al. discloses one or more of the criteria specify a number of device discovery inquiries to ignore **("A piconet starts with two connected devices, such as a computer system and a cellular phone, and may grow to eight connected devices", Column 6, Lines 64-66).**

Regarding **Claims 20** and **49**, Kammer et al. discloses everything claimed as applied above (see *Claims 15* and *44*, respectively). In addition, Kammer et al. discloses dispatching one or more of the criteria **("responder device 730 can receive a directed message (a message that specifies responder device 730 by its name and/or address, such as page 744) from initiator device 720", Column 12, Lines 7-10).**

Regarding **Claims 21** and **50**, Kammer et al. discloses everything claimed as applied above (see *Claims 15* and *44*, respectively). In addition, Kammer et al.

discloses one or more of the criteria are selected to realize power savings **("responder device 730 is in discoverable mode for a reduced period of time, thereby conserving power (battery) resources", Column 13, Lines 7-9).**

Regarding **Claims 22** and **51**, Kammer et al. discloses everything claimed as applied above (see *Claims 15* and *44*, respectively). In addition, Kammer et al. discloses one or more of the criteria are selected to realize discovery time responsiveness **("responder device 730 will also respond to fewer inquiries 740, which in turn will reduce the number of pages 744 and page responses 746", Column 13, Lines 10-12).**

Regarding **Claims 23** and **52**, Kammer et al. discloses everything claimed as applied above (see *Claims 15* and *44*, respectively). In addition, Kammer et al. discloses the processor further performs exchanging information regarding discovered devices **("The inquiry message enables the Bluetooth device to discover which other Bluetooth units are in range and what their addresses are, as well as other information such as their clocks and class-of-device", Column 8, Lines 44-48).**

Regarding **Claims 24** and **53**, Kammer et al. discloses everything claimed as applied above (see *Claims 15* and *44*, respectively). In addition, Kammer et al. discloses Bluetooth is employed **("portable computer system 400 is a Bluetooth-enabled device", Column 9, Lines 24-25).**

Regarding **Claims 28** and **57**, Kammer et al. discloses everything claimed as applied above (see *Claims 15* and *44*). In addition, Kammer et al. discloses the processor further performs maintaining a list of discovered devices **("The inquiry**

message enables the Bluetooth device to discover which other Bluetooth units are in range and what their addresses are, as well as other information such as their clocks and class-of-device", Column 8, Lines 44-48).

Regarding **Claims 29** and **58**, Kammer et al. discloses everything claimed as applied above (see *Claims 28* and *57*). In addition, Kammer et al. discloses a device not replying to a device discovery inquiry is, where one or more criteria are met, kept on the list **("responder device 730 is connectable when it is in either discoverable mode or in non-discoverable mode. That is, responder device 730 can receive a directed message (a message that specifies responder device 730 by its name and/or address, such as page 744) from initiator device 720. In addition, when connectable, responder device 730 can respond to page 744 (e.g., page response 746)", Column 12, Lines 5-12 and therefore, since it is connectable, it would be kept on the list even if the device did not respond).**

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 12-14, 25-27, 41-43 and 54-56** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kammer et al. further in view of Bahl et al. (PG Pub US 2004/0204071 A1).

Regarding **Claims 12** and **41**, Kammer et al. discloses everything claimed as applied above (see *Claims 1* and *30*, respectively). However, Kammer et al. fails to specifically disclose that ultra wide band is employed, as claimed.

Nevertheless, Bahl et al teaches **"These standards include ... UWB" (Bahl et al. [0003] Lines 5-8).**

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to employ UWB in Kammer et al.'s invention because **"there now exists several different wireless protocol standards that are competing in the marketplace" (Bahl et al. [0003] Lines 3-5).**

Regarding **Claims 13** and **42**, Kammer et al. discloses everything claimed as applied above (see *Claims 1* and *30*, respectively). However, Kammer et al. fails to specifically disclose that IEEE 802.11b is employed, as claimed.

Nevertheless, Bahl et al. teaches **"there now exists several different wireless protocol standards that are competing in the marketplace. These standards include 802.11b (also know as Wi-Fi for wireless fidelity)" (Bahl et al. [0003] Lines 5-6).**

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to employ IEEE 802.11b in Kammer et al.'s invention because **"there now exists several different wireless protocol standards that are competing in the marketplace" (Bahl et al. [0003] Lines 3-5).**

Regarding **Claims 14** and **43**, Kammer et al. discloses everything claimed as applied above (see *Claims 1* and *30*, respectively). However, Kammer et al. fails to specifically disclose that IEEE 802.11g is employed, as claimed.

Nevertheless, Bahl et al. teaches **"there now exists several different wireless protocol standards that are competing in the marketplace. These standards include ... 802.11g" (Bahl et al. [0003] Lines 5-7).**

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to employ IEEE 802.11g in Kammer et al.'s invention because **"there now exists several different wireless protocol standards that are competing in the marketplace" (Bahl et al. [0003] Lines 3-5).**

Regarding **Claims 25** and **54**, Kammer et al. discloses everything claimed as applied above (see *Claims 15* and *44*, respectively). However, Kammer et al. fails to specifically disclose that ultra wide band is employed, as claimed.

Nevertheless, Bahl et al teaches **"These standards include ... UWB" (Bahl et al. [0003] Lines 5-8).**

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to employ UWB in Kammer et al.'s invention because **"there now exists several different wireless protocol standards that are competing in the marketplace" (Bahl et al. [0003] Lines 3-5).**

Regarding **Claims 26** and **55**, Kammer et al. discloses everything claimed as applied above (see *Claims 15* and *44*, respectively). However, Kammer et al. fails to specifically disclose that IEEE 802.11b is employed, as claimed.

Nevertheless, Bahl et al. teaches **"there now exists several different wireless protocol standards that are competing in the marketplace. These standards include 802.11b (also know as Wi-Fi for wireless fidelity)" (Bahl et al. [0003] Lines 5-6).**

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to employ IEEE 802.11b in Kammer et al.'s invention because **"there now exists several different wireless protocol standards that are competing in the marketplace" (Bahl et al. [0003] Lines 3-5).**

Regarding **Claims 27** and **56**, Kammer et al. discloses everything claimed as applied above (see *Claims 15* and *44*, respectively). However, Kammer et al. fails to specifically disclose that IEEE 802.11g is employed, as claimed.

Nevertheless, Bahl et al. teaches **"there now exists several different wireless protocol standards that are competing in the marketplace. These standards include ... 802.11g" (Bahl et al. [0003] Lines 5-7).**

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to employ IEEE 802.11g in Kammer et al.'s invention because **"there now exists several different wireless protocol standards that are competing in the marketplace" (Bahl et al. [0003] Lines 3-5).**

Citation of Pertinent Prior Art

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Honda et al. (PG Pub US 2004/0072580 A1) discloses an apparatus having a device discovery function of discovering a new device that is present within a wireless communication area of the apparatus and a wireless communication control method that is applied to the apparatus.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Duong whose telephone number is (571) 270-1664. The examiner can normally be reached on Monday - Friday: 830 AM-6 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CTD 07/16/2007 CTD

Seema S. Rao
SEEMA S. RAO 7/23/07
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600